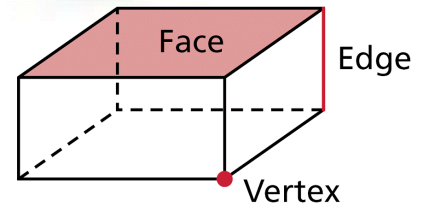


3. a polygon with four sides and with opposite sides parallel and congruent

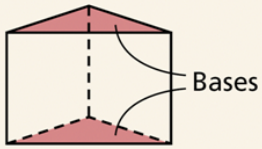
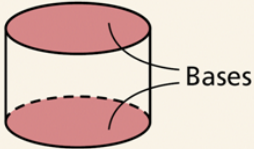
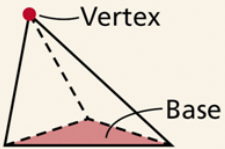
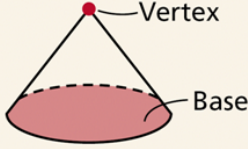
## Pre-AP Geometry 11-1 Solid Geometry (pp 742-748)

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**6.** Compare and contrast face, vertex and edge of a solid.



**Three-Dimensional Figures**

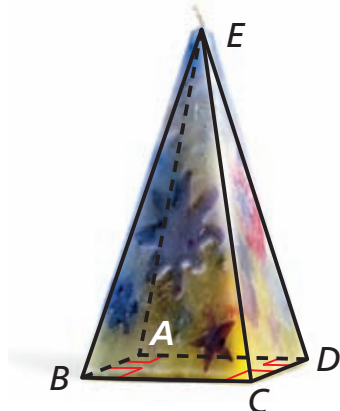
TERM	EXAMPLE
A <b>prism</b> is formed by two parallel congruent polygonal faces called <i>bases</i> connected by faces that are parallelograms.	
A <b>cylinder</b> is formed by two parallel congruent circular bases and a curved surface that connects the bases.	
A <b>pyramid</b> is formed by a polygonal base and triangular faces that meet at a common vertex.	
A <b>cone</b> is formed by a circular base and a curved surface that connects the base to a vertex.	

7. What is cube?

## 1 Classifying Three-Dimensional Figures

Classify each figure. Name the vertices, edges, and bases.

**A**



rectangular pyramid

vertices:  $A, B, C, D, E$

edges:  $\overline{AB}, \overline{BC}, \overline{CD}, \overline{AD}, \overline{AE},$   
 $\overline{BE}, \overline{CE}, \overline{DE}$

base: rectangle  $ABCD$

**B**



cylinder

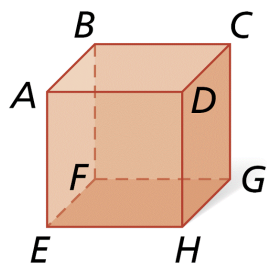
vertices: none

edges: none

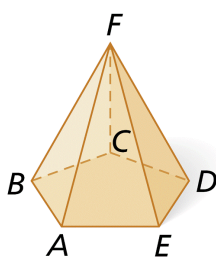
bases:  $\odot P$  and  $\odot Q$

**Example 1.** Classify the figure. Name the vertices, edges, and bases

A.

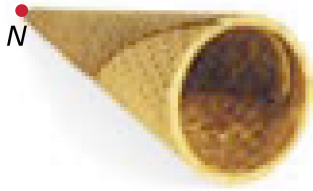


B.

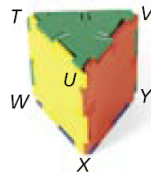


**Guided Practice.** Classify the figure. Name the vertices, edges, and bases.

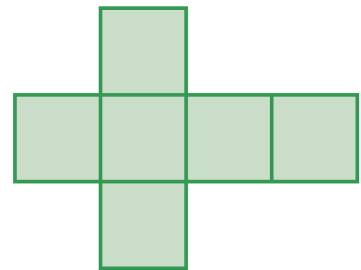
8.



9.

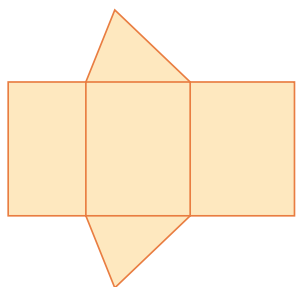


10. What is the net of figure?

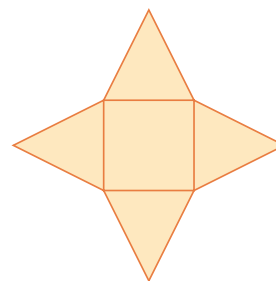


**2****Identifying a Three-Dimensional Figure From a Net**

Describe the three-dimensional figure that can be made from the given net.

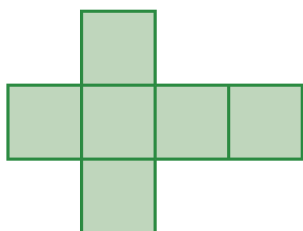
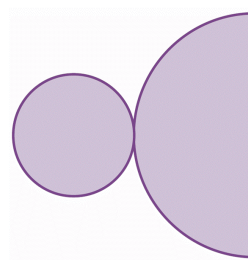
**A**

The net has two congruent triangular faces. The remaining faces are parallelograms, so the net forms a triangular prism.

**B**

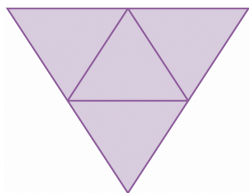
The net has one square face. The remaining faces are triangles, so the net forms a square pyramid.

**Example 2.** Describe the three-dimensional figure that can be made from the given net.

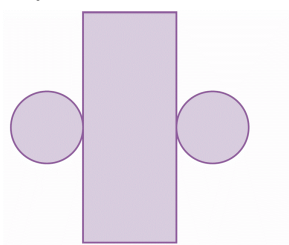
**A.****B.**

**Guided Practice.** Describe the three-dimensional figure that can be made from the given net.

11.



12.



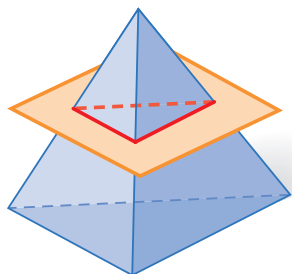
14. What is a cross section?

**3**

### Describing Cross Sections of Three-Dimensional Figures

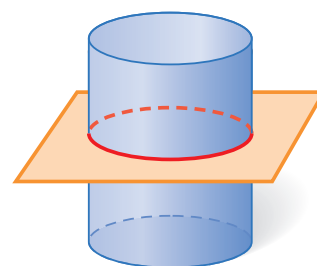
Describe each cross section.

**A**



The cross section is a triangle.

**B**



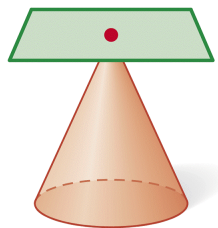
The cross section is a circle.

**Question:** What's the angriest part of 3-D figure?

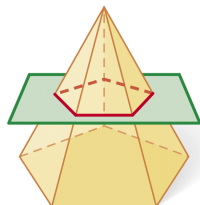
**Answer:** The cross-section.

**Example 3.** Describe the cross section.

A.

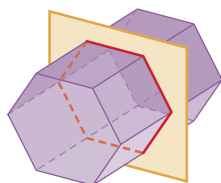


B.

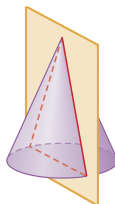


**Guided Practice.** Describe the cross section.

15.



16.



**11-1 Solid Geometry** (p 745) 13, 15, 17, 18, 19, 21.

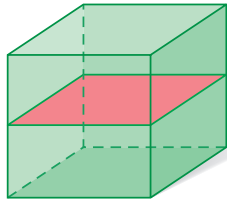
"When you are about to step off into the darkness of the unknown, Faith is knowing that one of two things will happen; There will be something solid to stand on or you will immediately learn to fly. "—*Patrick Overton*

#### **4 Food Application**

A chef is slicing a cube-shaped watermelon for a buffet. How can the chef cut the watermelon to make a slice of each shape?

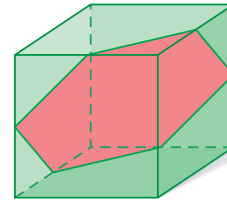


**A** a square



Cut parallel to the bases.

**B** a hexagon



Cut through the midpoints of the edges.

**Example 4.** A piece of cheese is a prism with equilateral triangular bases. How can you slice the cheese to make each shape?

A. An equilateral triangle

B. A rectangle

**17. Guided Practice.** How can a chef cut a cube-shaped watermelon to make slices with triangular faces?

**11-1 Solid Geometry** (p 745) 13, 15, 17, 18, 19, 21, 22, 23, 28, 34, 36, 37, 38-44.